

# NOKIA

1101 Connecticut Ave. N.W., Suite 910, Washington, D.C. 20036

June 19, 2000

Ms. Magalie Roman Salas  
Office of the Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
12<sup>th</sup> Street Lobby, TW-A325  
Washington, DC 20554

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JUN 19 2000

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Comments in CC Docket No. 94-102

Dear Ms. Salas:

Enclosed please find an original and four copies of Nokia's comments in response to the Wireless Telecommunications Bureau's Public Notice, DA 00-1091 in the above-captioned proceeding. Also enclosed is a duplicate copy to be date stamped and returned. If you should have any questions or need further information, please do not hesitate to contact me at (202) 887-5330.

Sincerely,



Leo R. Fitzsimon  
Director, Regulatory and Industry Affairs  
Nokia Inc.

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C.**

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**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**

In the Matter of	)	
	)	
Wireless Telecommunications Bureau	)	CC Docket No. 94-102
Seeks Comment on New Implementation	)	
Deadline for TTY Access to Digital	)	
Wireless Systems for 911 Calls	)	

**Comments of Nokia Inc.**

Nokia Inc. ("Nokia"), pursuant to Section 1.45 of the Commission's Rules, 47 C.F.R. § 1.45 (1999), hereby files these comments in response to the Commission' *Public Notice* ("Notice") in the above-captioned proceeding.<sup>1</sup>

Nokia is a global company with over 56,000 employees with key growth areas in wireless and wireline telecommunications. As a pioneer in mobile telephony, Nokia is the world's leading mobile phone supplier as well as a top supplier of mobile and fixed telecom networks and services. As a leading technology company, Nokia is committed to providing accessible telecommunications solutions for all consumers and thus is pleased to provide its views on the issues raised by the Commission in the *Notice*. In particular, Nokia will focus on the Commission's request for comment on whether the proposed deadline of December 31, 2001 is reasonable for the implementation of a digital wireless TTY solution.

Nokia believes that the answer to this question is determined by the state of the standards-setting process and the availability of tested, reliable data about the proposed solution from its developers. Only when the standard for a solution is well-developed

and adopted by relevant standards-setting bodies and sufficient information about the solution is available can manufacturers commit to timelines for implementing the solution in their products. Consequently, Nokia's ability to comment on the ability to meet the proposed December 31, 2001 deadline is dependent on the status of standards and the state of development of solutions for each of our technology platforms.

### **CDMA and TDMA**

For TDMA and CDMA products, Nokia plans to implement the Lucent solution and is committed to supporting carriers by supplying compliant products to meet the December 31, 2001 deadline, assuming the solution performs adequately in yet to be conducted field testing. As described in the *Notice*, the Lucent solution has been approved by the Telecommunications Industry Association (TIA) subcommittees TR45.5 (CDMA) and TR45.3 (TDMA).<sup>2</sup> Target products have been identified based on these standards and we plan to implement the solution onto handsets currently in development. The first implementation of the solution will be in mid-level handsets, which are supported by a wide range of accessories and will have the widest availability. Nokia plans to have testing handset software available in the first quarter of 2001 with prototype and test units available by June 2001.

As with any new product or feature development, however, there remains a risk that unforeseen complications in either the standard or in implementation of the standard into products will delay their availability. In particular, Nokia notes that while the Lucent solution has been approved by TIA, to this point there has been no actual field testing of

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<sup>1</sup> *Wireless Telecommunications Bureau Seeks Comment on New Implementation Deadline for TTY Access to Digital Wireless Systems for 911 Calls, Public Notice*, CC Docket No. 94-102 (rel. May 17, 2000)

the solution that Nokia is aware of. To date, Nokia is aware only of simulation testing and some laboratory testing of this solution. Only if the results of this testing can be replicated in actual field testing without significant modifications to the standard can Nokia be confident that it can supply compliant products to meet the December 31, 2001 deadline.

## **GSM**

Nokia is not able to commit to a GSM handset timeline without an established standard for GSM. While, as described in the *Notice*, the Ericsson solution has been preliminarily adopted for balloting by the Alliance for Telecommunications Industry Solutions (ATIS) Working Group T1P1.5, it is not certain that the standard will be completed and adopted by ATIS Committee T1 by September 2000 or that it will be available for implementation by that time. Without certainty as to the final standard, Nokia is unable at this time to commit to product development timelines.

Complicating the forecast for GSM products is the bifurcated approach to the provision of a solution. As described in the *Notice*, it appears that initially Ericsson's solution for TTY/GSM compatibility will involve a "smart cable."<sup>3</sup> Nokia believes that we could support a smart cable solution by the proposed deadline because such a solution would have little impact on the handset software. Currently, however, we do not plan to implement this solution, as our GSM customers have indicated to us that they do not support the cable solution. Carriers have indicated that a cable solution is not desirable for the following reasons:

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<sup>2</sup> *Notice* at 2.

<sup>3</sup> *Id.* at 4.

- For use of this product for E911, it requires at least two extra steps in the call process (identify need for a cable, attach cable -- *and* perhaps make a selection in the user interface, make a call to the PSAP). This may delay access to emergency services.
- Adding an additional, very specialized accessory to inventory would be a logistics problem. It would require further training of personnel and complex inventory management.
- It would require consumers to purchase an additional product to make their handsets compatible.
- There is a risk that consumers would not adopt such a solution, leaving carriers with unsellable inventory.
- It is not yet clear whether Ericsson will manufacture such a cable or each phone manufacturer will do so.
- Education of customers on the use of the device would involve not only extra point of sale attention but also customer care center time. Essentially it does not promote "ease of use" impression from the consumer.

It therefore appears that the only proposed solution remaining for GSM is the Ericsson integrated solution. As noted, above, this solution is not yet standardized and it is uncertain when the standardization process will actually be completed. Without a completed standard for GSM, it is difficult to project an implementation timeline for the long-term solution. Once the standard is finalized, Nokia will require at least 18 months to introduce compliant products. Assuming that the standard is in fact finalized in September of this year, this would mean that these handsets would be available at the earliest by the end of the first quarter of 2001. Nokia estimates that, given the complexity of the integrated GSM solution, it will be a full year until software is available for testing. Reasons for this include: major modifications to the software; solving the problem of considerable load on the DSP; and rewriting 50% new code for this solution over the TDMA and CDMA TTY codes.

While Nokia has devoted substantial resources to implement the integrated GSM solution, we believe that the time to implement it could be reduced if more data and

sample solutions were available. However, the Ericsson solution continues to be modified in the T1P1. Therefore its final iteration is not available. We are hopeful, however, that such information will be made available as soon as possible so that we can work to accelerate our implementation timeline for this solution.

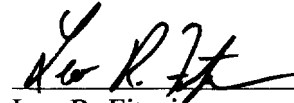
## **Conclusion**

Nokia is committed to providing accessible telecommunications solutions for all consumers and is committed to supporting carriers by supplying compliant products to meet the December 31, 2001 deadline. The ability to meet this deadline is dependent on the status of standards and the state of development of solutions for each of our technology platforms. For our CDMA and TDMA products, Nokia believes that we will be able to provide compliant products to meet the December 31, 2001 deadline, barring unforeseen complications in the standard or its implementation into our products. Nokia suggests that the Bureau monitor the progress of field testing of the Lucent solution to ensure that these test results confirm that the solution will perform as demonstrated in the lab. Because of the lack of finality and available data regarding the proposed GSM solution, Nokia cannot commit to a GSM handset timeline at this time. Once the standard is finalized, Nokia will require at least 18 months to introduce compliant products. Nokia

therefore requests that the Bureau extend the proposed compliance deadline for GSM products until a date that is 18 months after the final adoption of the standard.

Respectfully submitted,

**Nokia Inc.**

A handwritten signature in black ink, appearing to read "Leo R. Fitzsimon", is written over a horizontal line.

Leo R. Fitzsimon  
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(202) 887-5330

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